AMENDMENTS TO CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1. (Currently Amended) A transportation crew dispatch method based on one-day business, comprising the steps of:
- (A) generating a plurality of initial samples randomly, each including a two dimensional transportation crew dispatch coding table having a plurality of transportation duties, wherein the transportation crew dispatch coding table corresponds to one chromosome in a genetic algorithm, and each transportation duty in the transportation crew dispatch coding table corresponds to a gene in the genetic algorithm;
- (B) assigning the initial samples as parent samples, and performing a sample estimation based on object functions and confinement formulas to acquire sample fitness values of the chromosomes;
- (C) enhancing selection possibilities of chromosomes with relative superior fitness values by rule of roulette wheel;
- (D) performing processes of chromosome crossover and mutation responsive to the selection possibilities of single point cutting and double point cutting;
- (E) executing a process of sample update by partial gene exchange, wherein a fitness value of each sample is determined from business cost, satisfaction of fairness index, and the a disobedient cost of the confinement formulas; and
- (F) when the number of execution from step (B) to (E) has reached a limited value, or the confinement formula has a disobeying number of zero and variation of the sample fitness value is within a preset value, stopping the method; otherwise, the <u>utilizing</u> acquired samples being utilized as a parent generation and then performing the steps of (B) to (F) again.

- 2. (Original) The transportation crew dispatch method based on one-day business as claim in claim 1, wherein the transportation crew is a cockpit crew.
- 3. (Currently Amended) The transportation crew dispatch method based on one-day business as claim in claim—3_1, wherein the confinement formula includes a confinement of continuous working days, a maximum duty time confinement, a minimum rest time confinement, a duty time confinement, a standby member confinement, a driving training confinement, a special area driving confinement, a special line driving confinement, a confinement of the relation to the previous schedules, and a confinement of predetermined transportation duty combination.
- 4. (Original) The transportation crew dispatch method based on one-day business as claim in claim 3, wherein the object function includes cost of the confinement formula being zero, business cost being minimized, and the fairness index being uniformly distributed.
- 5. (Original) The transportation crew dispatch method based on one-day business as claim in claim 1, wherein the transportation crew is a cabin crew.
- 6. (Original) The transportation crew dispatch method based on one-day business as claim in claim 5, wherein the confinement formula includes a special station confinement in the duty combinations, a confinement of current day or next day for executing a duty, a confinement of a duty being executed at current day or next day, a special line confinement; and a confinement of the duty allowance, fairness of a special line or non-local lodging.
- 7. (Original) The transportation crew dispatch method based on a one day business as claim in claim 6, wherein the object function of chromosomes is divided into four parts: minimum level of the business cost, average level of a fairness index, satisfaction of personalization, and non-satisfaction level of each confinement formula.

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- 8. (Original) The transportation crew dispatch method based on a one day business as claim in claim 7, wherein the object function includes business costs, fairness indexes, personalization factors, and costs of confinement formulas.
- 9. (Original) The transportation crew dispatch method based on a one day business as claim in claim 8, wherein the business costs includes costs of entering into or leaving from a duty and costs of non-local lodging.
- 10. (Original) The transportation crew dispatch method based on a one day business as claim in claim 8, wherein the fairness indexes include meal fees, number of times of holidays, combinations of the carrier type, total numbers for waiting duties; and total time for executing duties.
- 11. (Original) The transportation crew dispatch method based on a one day business as claim in claim 8, wherein the factors of personalization includes personalized dispatch for standby duty and personalized dispatch for general duties.
- 12. (Original) The transportation crew dispatch method based on a one day business as claim in claim 8, wherein the disobedient cost of the confinement formulas is a product of a number of times that the chromosomes disobeying the confinement and corresponding penalty value.
- 13. (Original) The transportation crew dispatch method based on a one day business as claim in claim 12, wherein the disobedient cost of the confinement formula is zero.